特許協力条約に基づく国際出願願書

紙面による写し（注意：電子データが原本となります）

III-1	その他の出願人又は発明者	
III-1-1	この欄に記載した者は	出願人及び発明者である（applicant and inventor）
III-1-2	右の指定国についての出願人である。	米国のみ（US only）
III-1-4ja	氏名(姓名)	齋藤　栄
III-1-4en	Name (LAST, First):	SAITO Sakae
III-1-5ja	あて名	2630051 日本国 千葉県千葉市稲毛区園生町１３６６－１－１１０４
III-1-5en	Address:	1366-1-1104, Sonno-cho, Inage-ku, Chiba-shi, Chiba 2630051 Japan
III-1-6	国籍(国名)	日本国 JP
III-1-7	住所(国名)	日本国 JP
III-2	その他の出願人又は発明者	
III-2-1	この欄に記載した者は	出願人及び発明者である（applicant and inventor）
III-2-2	右の指定国についての出願人である。	米国のみ（US only）
III-2-4ja	氏名(姓名)	吉川　逸郎
III-2-4en	Name (LAST, First):	KIKKAWA Itsuro
III-2-5ja	あて名	2620032 日本国 千葉県千葉市花見川区幕張町１－７６７５－１－１２０１
III-2-5en	Address:	1-7675-1-1201, Makuhari-cho, Hanamigawa-ku, Chiba-shi, Chiba 2620032 Japan
III-2-6	国籍(国名)	日本国 JP
III-2-7	住所(国名)	日本国 JP
III-3	その他の出願人又は発明者	
III-3-1	この欄に記載した者は	出願人及び発明者である（applicant and inventor）
III-3-2	右の指定国についての出願人である。	米国のみ（US only）
III-3-4ja	氏名(姓名)	武田　昭信
III-3-4en	Name (LAST, First):	TAKEDA Akinobu
III-3-5ja	あて名	3292735 日本国 栃木県那須郡西那須野町太夫塚２－２０１－９
III-3-5en	Address:	2-201-9, Tayuzuka, Nishinasuno-cho, Nasu-gun, Tochigi 3292735 Japan
III-3-6	国籍(国名)	日本国 JP
III-3-7	住所(国名)	日本国 JP

特許協力条約に基づく国際出願願書

紙面による写し（注意：電子データが原本となります）

IV-1	代理人又は共通の代表者、通知のあて名 下記の者は国際機関において右記のごとく出願人のために行動する。	代理人 (agent)
IV-1-1ja	氏名(姓名)	藤本　英介
IV-1-1en	Name (LAST, First):	FUJIMOTO Eisuke
IV-1-2ja	あて名	1000014 日本国 東京都千代田区永田町二丁目１４番２号　山王グランドビルヂング３階３１７区
IV-1-2en	Address:	c/o Fujimoto Patent & Law Office, Room 317, Sanno Grand Building 3F., 14-2, Nagata-cho 2-chome, Chiyoda-ku, Tokyo 1000014 Japan
IV-1-3	電話番号	03-3593-2361
IV-1-4	ファクシミリ番号	03-3593-2822
IV-1-6	代理人登録番号	100112335
IV-2	その他の代理人	筆頭代理人と同じあて名を有する代理人 (additional agent(s) with the same address as first named agent)
IV-2-1ja	氏名	神田　正義(100101144)；宮尾　明茂(100101694)
IV-2-1en	Name(s)	KANDA Masayoshi(100101144); MIYAO Akishige(100101694)
V	国の指定	
V-1	この願書を用いてされた国際出願は、規則4.9(a)に基づき、国際出願の時点で拘束される全てのPCT締約国を指定し、取得しうるあらゆる種類の保護を求め、及び該当する場合には広域と国内特許の両方を求める国際出願となる。	
VI-1	先の国内出願に基づく優先権主張	
VI-1-1	出願日	2003年 10月 31日 (31.10.2003)
VI-1-2	出願番号	2003-372580
VI-1-3	国名	日本国 JP
VI-2	先の国内出願に基づく優先権主張	
VI-2-1	出願日	2004年 03月 26日 (26.03.2004)
VI-2-2	出願番号	2004-092900
VI-2-3	国名	日本国 JP
VI-3	優先権証明書送付の請求 上記の先の出願のうち、右記の番号のものについては、出願書類の認証謄本を作成し国際事務局へ送付することを、受理官庁に対して請求している。	VI-1, VI-2
VII-1	特定された国際調査機関(ISA)	日本国特許庁 (ISA/JP)

特許協力条約に基づく国際出願願書

紙面による写し（注意：電子データが原本となります）

VIII	申立て	申立て数	
VIII-1	発明者の特定に関する申立て	–	
VIII-2	出願し及び特許を与えられる国際出願日における出願人の資格に関する申立て	–	
VIII-3	先の出願の優先権を主張する国際出願日における出願人の資格に関する申立て	–	
VIII-4	発明者である旨の申立て（米国を指定国とする場合）	–	
VIII-5	不利にならない開示又は新規性喪失の例外に関する申立て	–	
IX	照合欄	用紙の枚数	添付された電子データ
IX-1	願書（申立てを含む）	5	✓
IX-2	明細書	14	✓
IX-3	請求の範囲	2	✓
IX-4	要約	1	✓
IX-5	図面	4	✓
IX-7	合計	26	
	添付書類	添付	添付された電子データ
IX-8	手数料計算用紙	–	✓
IX-17	PCT-SAFE 電子出願	–	–
IX-19	要約書とともに提示する図の番号	1	
IX-20	国際出願の使用言語名	日本語	
X-1	出願人、代理人又は代表者の記名押印	/100112335/	
X-1-1	氏名（姓名）	藤本　英介	
X-1-2	署名者の氏名		
X-1-3	権限		
X-2	出願人、代理人又は代表者の記名押印	/100101144/	
X-2-1	氏名（姓名）	神田　正義	
X-2-2	署名者の氏名		
X-2-3	権限		
X-3	出願人、代理人又は代表者の記名押印	/100101694/	
X-3-1	氏名（姓名）	宮尾　明茂	
X-3-2	署名者の氏名		
X-3-3	権限		

特許協力条約に基づく国際出願願書

紙面による写し（注意：電子データが原本となります）

受理官庁記入欄

10-1	国際出願として提出された書類の実際の受理の日	
10-2	図面	
10-2-1	受理された	
10-2-2	不足図面がある	
10-3	国際出願として提出された書類を補完する書類又は図面であってその後期間内に提出されたものの実際の受理の日（訂正日）	
10-4	特許協力条約第11条(2)に基づく必要な補完の期間内の受理の日	
10-5	出願人により特定された国際調査機関	ISA/JP
10-6	調査手数料未払いにつき、国際調査機関に調査用写しを送付していない	

国際事務局記入欄

11-1	記録原本の受理の日	

FWA4-18

特許協力条約に基づく国際出願願書

紙面による写し (注意:電子データが原本となります)

0	受理官庁記入欄	
0-1	国際出願番号	
0-2	国際出願日	
0-3	(受付印)	

0-4	様式-PCT/RO/101 この特許協力条約に基づく国際出願願書は、	
0-4-1	右記によって作成された。	JPO-PAS 0321
0-5	申立て 出願人は、この国際出願が特許協力条約に従って処理されることを請求する。	
0-6	出願人によって指定された受理官庁	日本国特許庁 (RO/JP)
0-7	出願人又は代理人の書類記号	FWA4-18
I	発明の名称	リフレクタ、光源装置、及び投射型表示装置
II	出願人	
II-1	この欄に記載した者は	出願人である (applicant only)
II-2	右の指定国についての出願人である。	米国を除く全ての指定国 (all designated States except US)
II-4ja	名称	シャープ株式会社
II-4en	Name:	SHARP KABUSHIKI KAISHA
II-5ja	あて名	5458522 日本国 大阪府大阪市阿倍野区長池町２２番２２号
II-5en	Address:	22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka 5458522 Japan
II-6	国籍(国名)	日本国 JP
II-7	住所(国名)	日本国 JP
II-8	電話番号	06-6606-5495
II-9	ファクシミリ番号	06-6606-5827
II-11	出願人登録番号	000005049

<The Amendment under PCT Article 34 made on July 6, 2005>

Written Amendment
(Amendment made based on Article 11 of Law Concerning the International Application of the Patent Cooperation Treaty and Related Matters, equivalent to Article 34 (2) (b) of Patent Cooperation Treaty)

To Commissioner of the Patent Office
(To Examiner Kouichi HOSHINO)

1. Indication of the International Application

PCT/JP2004/15487

2. Applicant

Name: SHARP KABUSHIKI KAISHA

Address: 22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka 545-8522 JAPAN

Country of nationality: JAPAN

Country of residence: JAPAN

3. Agent

Name: 11233 Patent Attorney FUJIMOTO Eisuke

Address: c/o Fujimoto Patent & Law Office
Room 317, Sanno Grand Building 3F.,
14-2, Nagata-cho 2-chome, Chiyoda-ku, Tokyo
100-0014 JAPAN

4. Object to be amended (1) Claims

5. Content of the amendment

(1) In Claim 1, "a predetermined wavelength" on line 17 is replaced by "the predetermined wavelength".

(1) Claim 2 is totally replaced by

"A reflector comprising:

a discharge-type arc tube emitting light;

a heat radiating means composed of a concave mirror shaped substrate having a thermal conductivity of 10 W/m·K or greater;

a light-to-heat converting component arranged on the light-reflecting surface side of the heat radiating means for absorbing light of a predetermined wavelength range, radiated from the discharge-type arc tube and converting it to heat;

a specific wavelength range reflecting component which reflects light of a specific wavelength range onto the light-to-heat converting component and permits light of the predetermined wavelength range to pass therethrough; and

a buffering component consisting of an organic resin, disposed between the light-to-heat converting component and the specific wavelength range reflecting component for buffering so that the light-to-heat converting component and the specific wavelength range reflecting component will not come in direct contact with each other and for permitting

light of the predetermined wavelength range that passes through the specific wavelength range reflecting component to pass therethrough".

(2) In Claim 3, before "over the joined interface where the light-to-heat converting component and the heat radiating means are joined" on lines 2~4, "the light-to-heat converting component, the buffering component and the specific wavelength range reflecting component are laminated in the order mentioned over the reflective surface of the heat radiating means and joined in surface contact with one another; and" is inserted, and after "over the entire, joined interface" on line 2, "to diffuse light of a specific wavelength range so that the reflected light will not concentrate on a particular point" is inserted.

(3) In Claim 4, "Claim 2" on line 1 is replaced by "Claim 1, 2 or 3", and after "over the buffering component-side surface " on lines 2-3, "over the entire surface, so that light of a specific wavelength range that could not be absorbed but was reflected will be made incident once again on the light-to-heat converting component and so that light that could not be absorbed but was reflected will not concentrate on a particular point" is inserted.

(4) In Claim 5, "a substrate having a thermal conductivity of 10 W/m·K or greater" on lines 2-3 is replaced by "an aluminum substrate".

(5) In Claim 6, "Claims 2 to 5" on line 1 is replaced by "Claims 1 to 5".

(7) In Claim 7, "Claims 2 to 6" on line 1 is replaced by "Claims 1 to 6".

(8) Claim 8 is deleted

(9) In Claim 9, "Claims 1 to 8" on line 2 is replaced by "Claims 1 to 7".

6. List of the appended documents:

(1) Claims after amendment

Pages to 32 to 35 One copy for each

CLAIMS

[1] (After amendment) A reflector comprising:

a heat radiating means composed of a concave mirror-shaped substrate;

a light-to-heat converting component arranged on the light-reflecting surface side of the heat radiating means for absorbing light of a predetermined wavelength range to converting it to heat;

a specific wavelength range reflecting component which reflects light of a specific wavelength range onto the light-to-heat converting component and permits light of the predetermined wavelength range to pass therethrough; and

a buffering component disposed between the light-to-heat converting component and the specific wavelength range reflecting component for buffering so that the light-to-heat converting component and the specific wavelength range reflecting component will not come in direct contact with each other and for permitting light of the predetermined wavelength range that passes through the specific wavelength range reflecting component to pass therethrough.

[2] (After amendment) A reflector comprising:

a discharge-type arc tube emitting light;

a heat radiating means composed of a concave mirror shaped substrate having a thermal conductivity of 10 W/m·K or greater;

a light-to-heat converting component arranged on the

light-reflecting surface side of the heat radiating means for absorbing light of a predetermined wavelength range, radiated from the discharge-type arc tube and converting it to heat;

a specific wavelength range reflecting component which reflects light of a specific wavelength range, radiated from the discharge-type arc tube onto the light-to-heat converting component and permits light of the predetermined wavelength range to pass therethrough; and

a buffering component consisting of an organic resin, disposed between the light-to-heat converting component and the specific wavelength range reflecting component for buffering so that the light-to-heat converting component and the specific wavelength range reflecting component will not come in direct contact with each other and for permitting light of the predetermined wavelength range that passes through the specific wavelength range reflecting component to pass therethrough.

[3] (After amendment) The reflector according to Claim 1 or 2, wherein the light-to-heat converting component, the buffering component and the specific wavelength range reflecting component are laminated in the order mentioned over the reflective surface of the heat radiating means and joined in surface contact with one another; and projections and indentations are formed over the entire, joined interface

where the light-to-heat converting component and the heat radiating means are joined, to diffuse light of a specific wavelength range so that the reflected light will not concentrate on a particular point.

[4] (After amendment) The reflector according to Claim 1, 2 or 3, wherein projections and indentations are formed over the entire, buffering component side surface of the light-to-heat converting component, so that light of a specific wavelength range that could not be absorbed but was reflected will be made incident once again on the light-to-heat converting component and so that light that could not be absorbed but was reflected will not concentrate on a particular point.

[5] (After amendment) The reflector according to any one of Claims 1 to 4, wherein the heat radiating means is composed of an aluminum substrate and also provides the function of the light-to-heat converting component.

[6] (After amendment) The reflector according to any one of Claims 1 to 5, wherein the light-to-heat converting component is formed by anodizing aluminum in an aqueous solution of chromic anhydride.

[7] (After amendment) The reflector according to any one of Claims 1 to 6, wherein the buffering component is film-formed on the light-absorbing surface side of the light-to-heat converting component by calcining Si resin or polyimide resin

at high temperatures.

[8] (Deleted)

[9] (After amendment) A light source device including a reflector according to any one of claims 1 to 7, in addition to a light source.

[10] A projection display apparatus including a light source device according to Claim 9.

<The Amendment under PCT Article 34 made on November 18, 2005>

Written Amendment
(Amendment made based on Article 11 of Law Concerning the International Application of the Patent Cooperation Treaty and Related Matters, equivalent to Article 34 (2) (b) of Patent Cooperation Treaty)

To Commissioner of the Patent Office
(To Examiner Kouichi HOSHINO)

1. Indication of the International Application

PCT/JP2004/015487

2. Applicant

Name: SHARP KABUSHIKI KAISHA

Address: 22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka 545-8522 JAPAN

Country of nationality: JAPAN

Country of residence: JAPAN

3. Agent

Name: 11233 Patent Attorney FUJIMOTO Eisuke

Address: c/o Fujimoto Patent & Law Office
Room 317, Sanno Grand Building 3F.,
14-2, Nagata-cho 2-chome, Chiyoda-ku, Tokyo
100-0014 JAPAN

4. Object to be amended (1) Claims

5. Content of the amendment (cf. Appended paper)

(1) In Claim 1, "range reflecting component to pass therethrough" on line 19 is replaced by "range reflecting component to pass therethrough,
the reflector being characterized in that the light-to-heat converting component, the buffering component and the specific wavelength range reflecting component are laminated in the order mentioned over the reflective surface of the heat radiating means and joined in surface contact with one another, and projections and indentations are formed over the entire, joined interface where the light-to-heat converting component and the heat radiating means are joined, to diffuse light of a specific wavelength range so that the reflected light will not concentrate on a particular point".

(2) In Claim 2, "to pass therethrough" on line 23 is replaced by "to pass therethrough,
the reflector being characterized in that the light-to-heat converting component, the buffering component and the specific wavelength range reflecting component are laminated in the order mentioned over the reflective surface of the heat radiating means and joined in surface contact with one another, and projections and indentations are formed over the entire, joined interface where the light-to-heat converting component

and the heat radiating means are joined, to diffuse light of a specific wavelength range so that the reflected light will not concentrate on a particular point".

(3) In Claim 3, "the light-to-heat converting component, ... so that the reflected light will not concentrate on a particular point" on lines 2 to 23 is replaced by "projections and indentations are formed over the entire, buffering component side surface of the light-to-heat converting component, so that light of a specific wavelength range that could not be absorbed but was reflected will be made incident once again on the light-to-heat converting component and so that light that could not be absorbed but was reflected will not concentrate on a particular point".

(4) In Claim 4, " The reflector according to Claim 1, 2 or 3, wherein" on lines 1 to 2 is replaced by "A reflector comprising:

a heat radiating means composed of a concave mirror-shaped substrate;

a light-to-heat converting component arranged on the light-reflecting surface side of the heat radiating means for absorbing light of a predetermined wavelength range to converting it to heat;

a specific wavelength range reflecting component which reflects light of a specific wavelength range onto the light-to-heat converting component and permits light of the

predetermined wavelength range to pass therethrough; and

a buffering component disposed between the light-to-heat converting component and the specific wavelength range reflecting component for buffering so that the light-to-heat converting component and the specific wavelength range reflecting component will not come in direct contact with each other and for permitting light of the predetermined wavelength range that passes through the specific wavelength range reflecting component to pass therethrough,

the reflector being characterized in that".

(5) Claim 5 is totally replaced by

"A reflector comprising:

a discharge-type arc tube emitting light;

a heat radiating means composed of a concave mirror shaped substrate having a thermal conductivity of 10 W/m·K or greater;

a light-to-heat converting component arranged on the light-reflecting surface side of the heat radiating means for absorbing light of a predetermined wavelength range, radiated from the discharge-type arc tube and converting it to heat;

a specific wavelength range reflecting component which reflects light of a specific wavelength range, radiated from the discharge-type arc tube onto the light-to-heat converting component and permits light of the predetermined wavelength range to pass therethrough; and

a buffering component consisting of an organic resin, disposed between the light-to-heat converting component and the specific wavelength range reflecting component for buffering so that the light-to-heat converting component and the specific wavelength range reflecting component will not come in direct contact with each other and for permitting light of the predetermined wavelength range that passes through the specific wavelength range reflecting component to pass therethrough,

the reflector being characterized in that projections and indentations are formed over the entire, buffering component side surface of the light-to-heat converting component, so that light of a specific wavelength range that could not be absorbed but was reflected will be made incident once again on the light-to-heat converting component and so that light that could not be absorbed but was reflected will not concentrate on a particular point".

(6) In Claim 6, "the light-to-heat converting component is ... chromic anhydride" on lines 2 to 4 is replaced by "the heat radiating means is composed of an aluminum substrate and also provides the function of the light-to-heat converting component".

(7) In Claim 7, "the buffering component is ... at high temperatures" on lines 2 to 5 is replaced by "the light-to-heat converting component is formed by anodizing aluminum in an

aqueous solution of chromic anhydride".

(8) Added as Claim 8 is "The reflector according to any one of Claims 1 to 7, wherein the buffering component is film-formed on the light-absorbing surface side of the light-to-heat converting component by calcining Si resin or polyimide resin at high temperatures".

(9) In Claim 9, "Claims 1 to 7" on line 2 is replaced by "Claims 1 to 8".

6. List of the appended documents:

(1) Claims after amendment

Pages to 32 to 37 One copy for each

CLAIMS

[1] (After amendment) A reflector comprising:

a heat radiating means composed of a concave mirror-shaped substrate;

a light-to-heat converting component arranged on the light-reflecting surface side of the heat radiating means for absorbing light of a predetermined wavelength range to converting it to heat;

a specific wavelength range reflecting component which reflects light of a specific wavelength range onto the light-to-heat converting component and permits light of the predetermined wavelength range to pass therethrough; and

a buffering component disposed between the light-to-heat converting component and the specific wavelength range reflecting component for buffering so that the light-to-heat converting component and the specific wavelength range reflecting component will not come in direct contact with each other and for permitting light of the predetermined wavelength range that passes through the specific wavelength range reflecting component to pass therethrough,

the reflector being characterized in that the light-to-heat converting component, the buffering component and the specific wavelength range reflecting component are laminated in the order mentioned over the reflective surface of the heat radiating means and joined in surface contact with one another,

and projections and indentations are formed over the entire, joined interface where the light-to-heat converting component and the heat radiating means are joined, to diffuse light of a specific wavelength range so that the reflected light will not concentrate on a particular point.

[2] (After amendment) A reflector comprising:

a discharge-type arc tube emitting light;

a heat radiating means composed of a concave mirror shaped substrate having a thermal conductivity of 10 W/m·K or greater;

a light-to-heat converting component arranged on the light-reflecting surface side of the heat radiating means for absorbing light of a predetermined wavelength range, radiated from the discharge-type arc tube and converting it to heat;

a specific wavelength range reflecting component which reflects light of a specific wavelength range, radiated from the discharge-type arc tube onto the light-to-heat converting component and permits light of the predetermined wavelength range to pass therethrough; and

a buffering component consisting of an organic resin, disposed between the light-to-heat converting component and the specific wavelength range reflecting component for buffering so that the light-to-heat converting component and the specific wavelength range reflecting component will not come in direct contact with each other and for permitting

light of the predetermined wavelength range that passes through the specific wavelength range reflecting component to pass therethrough,

the reflector being characterized in that the light-to-heat converting component, the buffering component and the specific wavelength range reflecting component are laminated in the order mentioned over the reflective surface of the heat radiating means and joined in surface contact with one another, and projections and indentations are formed over the entire, joined interface where the light-to-heat converting component and the heat radiating means are joined, to diffuse light of a specific wavelength range so that the reflected light will not concentrate on a particular point.

[3] (After amendment) The reflector according to Claim 1 or 2, wherein projections and indentations are formed over the entire, buffering component side surface of the light-to-heat converting component, so that light of a specific wavelength range that could not be absorbed but was reflected will be made incident once again on the light-to-heat converting component and so that light that could not be absorbed but was reflected will not concentrate on a particular point.

[4] (After amendment) A reflector comprising:

a heat radiating means composed of a concave mirror-shaped substrate;

a light-to-heat converting component arranged on the

light-reflecting surface side of the heat radiating means for absorbing light of a predetermined wavelength range to converting it to heat;

a specific wavelength range reflecting component which reflects light of a specific wavelength range onto the light-to-heat converting component and permits light of the predetermined wavelength range to pass therethrough; and

a buffering component disposed between the light-to-heat converting component and the specific wavelength range reflecting component for buffering so that the light-to-heat converting component and the specific wavelength range reflecting component will not come in direct contact with each other and for permitting light of the predetermined wavelength range that passes through the specific wavelength range reflecting component to pass therethrough,

the reflector being characterized in that projections and indentations are formed over the entire, buffering component side surface of the light-to-heat converting component, so that light of a specific wavelength range that could not be absorbed but was reflected will be made incident once again on the light-to-heat converting component and so that light that could not be absorbed but was reflected will not concentrate on a particular point.

[5] (After amendment) A reflector comprising:

a discharge-type arc tube emitting light;

a heat radiating means composed of a concave mirror shaped substrate having a thermal conductivity of 10 W/m·K or greater;

a light-to-heat converting component arranged on the light-reflecting surface side of the heat radiating means for absorbing light of a predetermined wavelength range, radiated from the discharge-type arc tube and converting it to heat;

a specific wavelength range reflecting component which reflects light of a specific wavelength range, radiated from the discharge-type arc tube onto the light-to-heat converting component and permits light of the predetermined wavelength range to pass therethrough; and

a buffering component consisting of an organic resin, disposed between the light-to-heat converting component and the specific wavelength range reflecting component for buffering so that the light-to-heat converting component and the specific wavelength range reflecting component will not come in direct contact with each other and for permitting light of the predetermined wavelength range that passes through the specific wavelength range reflecting component to pass therethrough,

the reflector being characterized in that projections and indentations are formed over the entire, buffering component side surface of the light-to-heat converting component, so that light of a specific wavelength range that could not be

absorbed but was reflected will be made incident once again on the light-to-heat converting component and so that light that could not be absorbed but was reflected will not concentrate on a particular point.

[6] (After amendment) The reflector according to any one of Claims 1 to 5, wherein the heat radiating means is composed of an aluminum substrate and also provides the function of the light-to-heat converting component.

[7] (After amendment) The reflector according to any one of Claims 1 to 6, wherein the light-to-heat converting component is formed by anodizing aluminum in an aqueous solution of chromic anhydride.

[8] (After amendment) The reflector according to any one of Claims 1 to 7, wherein the buffering component is film-formed on the light-absorbing surface side of the light-to-heat converting component by calcining Si resin or polyimide resin at high temperatures.

[9] (After amendment) A light source device including a reflector according to any one of claims 1 to 8, in addition to a light source.

[10] A projection display apparatus including a light source device according to Claim 9.